St. Louis 8-Hour Ozone Issues

- Phase 1, 8-hour implementation rule
- Planning Milestones
- Upwind NOx rule (Buffer-zone proposal)
- CAIR, NOx SIP Call
- Other Issues

June 2, 2004

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Phase 1, 8-hour implementation rule

- Rule signed on April 15, 2004
- St. Louis classified as “Moderate”

St. Louis 8-Hour Ozone Issues

Classification for 8-Hour Ozone NAAQS		
Area Classification	8-Hour design value (ppb ozone)	
Marginal	From Up to *	85 92
Moderate	From Up to *	92 107
Serious	From Up to *	107 120
Severe 15	From Up to *	120 127
Severe 17	From Up to *	127 187
Extreme	Above	187
* but not including		

Phase 1, 8-hour implementation rule

- Rule signed on April 15, 2004
- St. Louis classified as “Moderate”
- RFG & I/M requirements same as 1-hour (Phase 2)
- RFP 3% per year (Phase 2) - VOC or NOx?
- RACT
- Full Blown attainment demonstration

8-hour Planning Milestones

- Technical Evaluation (Emission Inventory, Model Performance Evaluation, Control Strategy Modeling): Today - 2006
- Attainment Demonstration Modeling: 2006
- SIP Submittal: June 15, 2007
- Emission Reductions by ozone season: 2008
- Attainment date - June 2010.

Phase 1, 8-hour implementation rule

- Attainment date for moderate areas - 6 years (June 15, 2010)
- 1-hour standard revoked on April 15, 2005.
- 1-hour mandatory requirements must be retained until St. Louis attains 8-hour standard.
- NSR transition

Phase 1, 8-hour implementation rule

- Transportation Conformity transition.

Upwind NOx / Buffer Zone Rulemaking

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Air Quality Modeling Unit Chief
Air Pollution Control Program

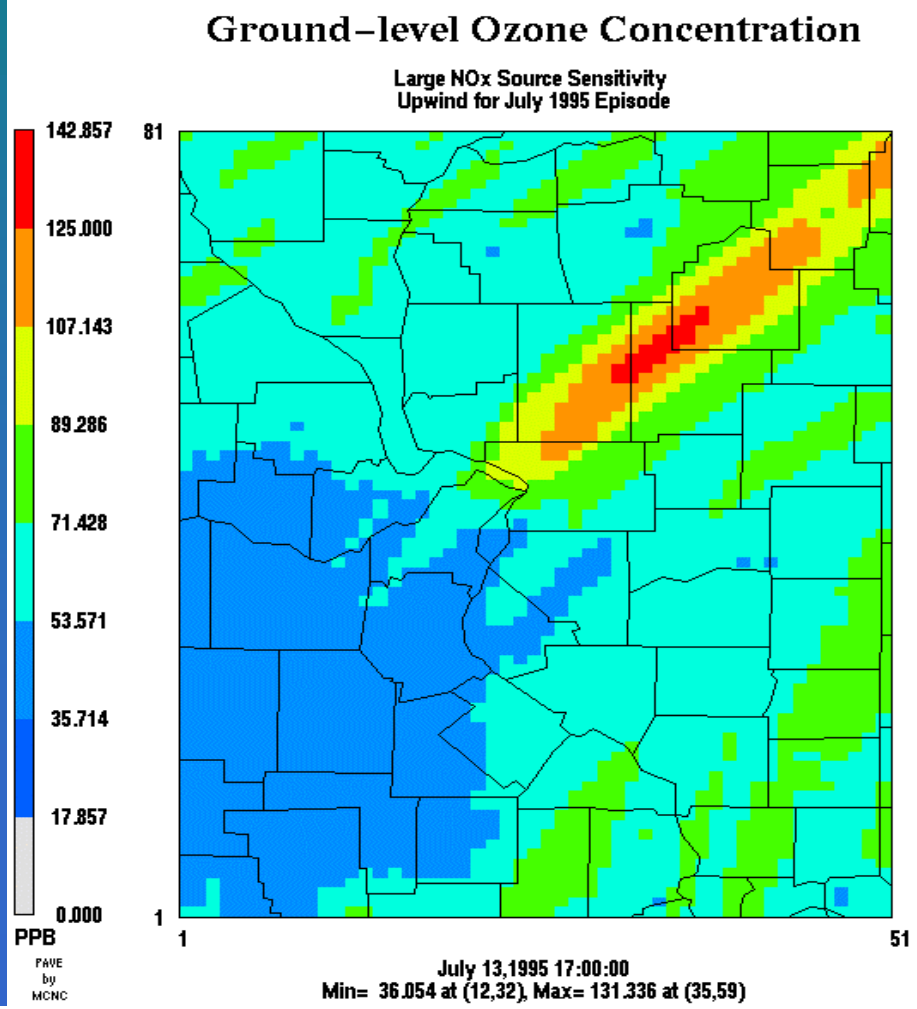
Background

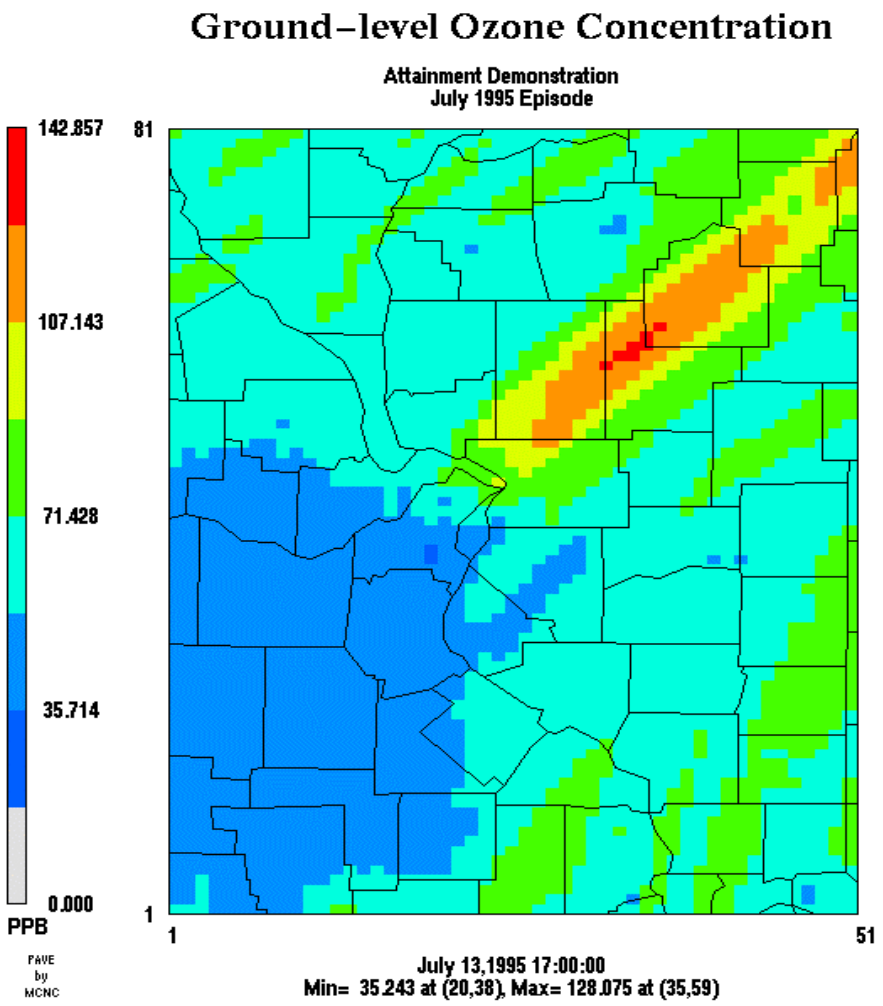
- Large NOx sources have requested PSD permits in southeastern MO (>10,000 TPY)

- Concerned regarding downwind ozone impact on St. Louis due to very large size of sources

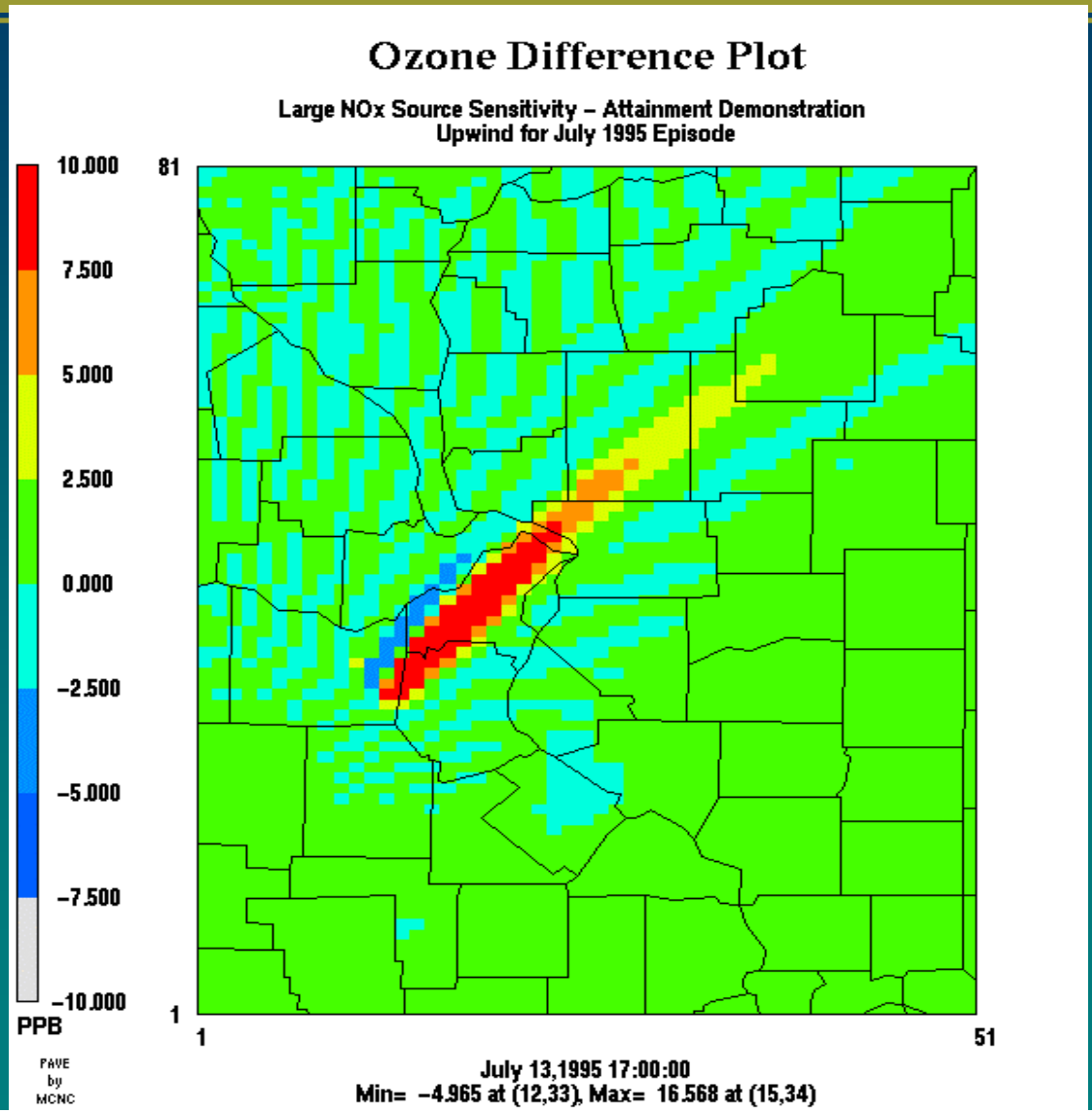
- Performed photochemical modeling of each source with existing attainment demonstration to assess impact (if any)

Ozone Impact Sensitivity Analysis





Ozone Difference Plot



Problem

- No guidance on use of inventory analysis or modeling to determine “significance”

- States are left to decide if a source should receive a permit based on their PSD program (uncertainty for sources)

- Current PSD regulations have very limited protection for ozone air quality

Problem (continued)

- Permit(s) issued will cause increased ozone in areas with difficulties attaining the 1-hour or 8-hour ozone NAAQS

- Future control requirements will prove very costly to the downwind area

- No guidance on mitigation steps if a source is shown to have a detrimental impact

Solution

- Missouri Air Conservation Commission passed a resolution on March 25, 2004 that directed the Air Program to develop a rule to address this issue

- The resolution is based on the following:
  - 900 TPOS NOx emissions source inclusion
  - Mitigation for these sources that have a significant modeled impact on the downwind St. Louis area
  - Mitigation can include offsets for emissions above the seasonal emission threshold

Solution (continued)

- Sources in upwind counties will be included in this rule (Perry, Ste. Genevieve, St. Francois, Washington, and Warren)

- Current Action - Workgroup developed to engage interested parties to begin the rule development process

- Anyone interested can e-mail:

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Other Issues

- IAQR now CAIR
- NOx SIP call
- Other Issues

"BUMP DOWN"

- St. Louis monitoring shows that "bump down" is within range
- Must meet criteria established by EPA guidance
- May or may not be in the best interest of St. Louis

"BUMP DOWN"

- Area would have been classified in a lower category if the design value were 5 percent less.
- EPA will not exercise its authority to "Bump Down" without a formal request from the state.

"BUMP DOWN"

- Discontinuity: A "Bump Down" must not result in an illogical or excessive discontinuity relative to surrounding areas. In particular, in light of the area-wide nature of ozone formation, a "Bump Down" should not create a small area of one classification that is surrounded by areas of higher classification.

"BUMP DOWN"

- Attainment: Evidence should be available that the proposed area would very likely achieve the appropriate total percent emission reduction necessary to attain in the shorter time period.
- Emission reduction: Evidence should be available that the area would be very likely to achieve the appropriate total percent emission reduction necessary to attain in the shorter time period.

"BUMP DOWN"

- Trends: Near- and long-term trends in emissions and air quality should support a "Bump Down". Historical air quality data should indicate substantial air quality improvement. Growth projections and emission trends should support a "Bump Down" VMT and other indicators of emissions should not be increasing at higher than normal rates.

"BUMP DOWN" Issues

- Attainment deadline
- RFP
- Consequences of failure to attain
- NSR
- RACT/RACM
- SIP Submittal deadline
- Photochemical grid modeling necessary for attainment demonstration

"BUMP DOWN" Issues

- Transportation Conformity
- Maintenance Plan – Redesignation to attainment

Final Questions

June 2, 2004

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Environmental Engineer

Final Questions